

Template for Bicycle and Pedestrian Plans North Carolina Department of Transportation

The template below reflects the suggested organization and content for development of a comprehensive municipal bicycle or pedestrian plan. This template was developed as a guide to municipalities preparing a plan with funds received through the NCDOT Bicycle and Pedestrian Planning Grant Initiative.

Preface

- I. Title page
- II. Acknowledgements

Executive Summary

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Section 1: Introduction

I. Vision Statement

- A. Creating bike/ped friendly environments
- B. Current walking and bicycling trends
- C. Developing a viable bicycle or pedestrian transportation system
- D. Enhancing the safety and health of users
- E. Promoting livability

II. History

- A. Benefits of bicycling and walking
- B. Past municipal efforts (general description)
- C. Planning studies
- D. Projects
- E. Involved agencies and partners
- F. Citizen initiatives
- G. Current trends / initiatives (general description)
- H. Statement of community support

III. Overall Goals

- A. Long range objectives
- B. Short range objectives

IV. Scope and Purpose of Plan

- A. Need for plan
- B. Scope (general description)
 - 1. Identify focus
 - a) Bicycle or pedestrian

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b) Development of on and off-road system / projects

2. Define study area
3. Identify relevant issues

C. Purpose (general description)

1. Increase bicycling and walking trips
2. Improve bicycle or pedestrian access and transportation options
3. Assess current conditions, initiatives and opportunities
4. Identify high use areas
5. Understand and meet the needs of users
 - a) Bicycling and walking trip characteristics
 - b) Transportation priorities
 - c) Safety considerations
 - d) Barriers to bicycling and walking
 - e) Special populations needs
6. Develop long and short range project and program priorities
 - a) Integrate plan with other state, regional and local planning initiatives
 - b) Implement existing local, state and federal policies and guidelines
 - c) Identify high-priority TIP projects
 - d) Enhance interface with other transportation modes
7. Develop an action plan
 - a) Identify tasks
 - b) Identify and involve partners
 - i) State, regional and local agencies
 - ii) Elected officials
 - iii) Advocacy groups
 - iv) Public / private partnerships
 - Develop implementation strategies
8. Make recommendations
 - a) Projects
 - b) Policies
 - c) Funding
 - d) Staffing/committees
 - e) Local ordinances
 - f) Program initiatives
9. Provide standards and guidelines for the development of bike/ped facilities
10. Raise community awareness of bike/ped needs and issues

Section 2: Evaluating Current Conditions**I. Overview**

- A. Describe community
 1. Demographics
 2. Physical characteristics
 3. Overall transportation network
- B. Determine community concerns, needs and priorities
- C. Analyze local bike/ped crash data

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1. Identify high risk areas
2. Identify high risk populations

II. Assess Bike/Ped Compatibility of Local Transportation System

- A. Street and highway system access
 1. Intersections treatments
 2. On-road accommodations
 3. Bridges and culverts
- B. Bike/ped system access
 1. Connectivity
 2. Origin/destination points
 3. Transportation vs. recreation function
 4. Gaps, hazards and barriers (deficiencies)
- C. Transit interface
 1. Bikes on bus
 2. Sidewalk access to stops
 3. Shelters and street furniture
 4. Bike parking facilities

III. Describe current Usage / User Demographics

- A. Bicycling and walking trip characteristics
- B. Population/demographics information
- C. Evaluate usage
- D. User observations/attitudes
- E. Terrain/geographical considerations
- F. Regional context
- G. Issues to be addressed

IV. Inventory and Assess Existing Bicycle or Pedestrian Facilities

- A. Document / map existing bike/ped facilities
- B. Assess safety
- C. Appraise condition of facilities
 1. Pavement quality
 2. Lateral clearance
- D. Assess adherence to standards
 1. Width
 2. Grade and curvature
 3. Sight distance
 4. Signage and markings
 5. Bridge and culvert requirements
 6. Intersection treatments
- E. Evaluate capacity/level of service
- F. Evaluate utility as part of system
 1. Assess connectivity
 2. Assess origin/destination points
 3. Address transportation vs. recreation function
 4. Identify gaps, hazards and barriers (deficiencies)
 5. Identify potential countermeasures

Section 3: Existing Plans, Programs and Policies**I. Relevant local, regional and state plans and guidelines**

- A. Bicycle plans

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- B. Pedestrian plans
- C. Greenway plans / Parks and Recreation plans
- D. Comprehensive transportation plans
 - 1. Land use plans
 - 2. Zoning plans
 - 3. Neighborhood plans
- E. Transportation Improvement Program (TIP)
- F. Roadway design (project) plans
- G. Capital improvement plans (CIP)
- H. Development guidelines
 - 1. Urban design guidelines
 - 2. Street design guidelines
- I. Other

II. Programs and initiatives currently underway or planned

- A. Local construction projects
- B. NCDOT Transportation Improvement Program (TIP) projects
 - 1. Independent projects
 - 2. Incidental projects
 - 3. Enhancement projects
 - 4. Spot improvement projects
- C. Safety and education programs and resources
 - 1. Local agency initiatives
 - 2. Community/advocacy group initiatives
 - 3. School-based programs
 - 4. Youth group programs
 - 5. Other
- D. Law enforcement programs and initiatives
 - 1. Police on bikes
 - 2. Registration programs
 - 3. Enforcement programs (enforcement of laws)
 - 4. Encouragement programs
- E. Commuter/incentive programs
 - 1. Bikes on bus
 - 2. Major events
 - 3. Advocacy initiatives

III. Policies and institutional framework

- A. Funding sources and levels
- B. Mainstreaming of bike/ped considerations
- C. Land development guidelines
- D. Local ordinances
- E. Staffing and committees assigned to bike/ped
- F. Interagency partnerships
- G. Public / private partnerships

IV. Relevant bicycle or pedestrian statutes and ordinances

- A. State Laws
- B. Local zoning Ordinances
- C. Uniform Development Ordinance
- D. Other

Section 4: Develop Strategic Bicycle or Pedestrian System Plan

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1. Overall network (general description)
 - a) Connectivity
 - b) Existing on-road and off-road segments
 - c) Street crossings / intersection treatments
2. Gaps in system
3. Barriers to bicycle or pedestrian travel
 - a) Natural barriers (water features, steep terrain, etc)
 - b) Man-made barriers (cul-de sacs, limited access roadways, land development patterns, shopping centers, etc.)
4. Safety hazards
 - a) Surface (drain grates, railroad crossings, rumble strips, etc.)
 - b) Geometric (narrow lanes, sight obstructions, etc.)
 - c) Operational (high speed traffic, high traffic volumes, etc.)

B. High crash areas**C. Goals for future system****II. Corridor identification**

- A. Identify desired corridors of travel
- B. Map the generators/attractors
- C. Investigate origin-destination points

III. Incorporate short-term and long-term opportunities

- A. New construction projects
 1. Bicycle or pedestrian
 2. Roadways and bridges
- B. Upgrade/retrofit of existing facilities
 1. Bicycle and pedestrian
 2. Roadways and bridges
 3. Intersection improvements
- C. Maintenance programs
 1. Resurfacing
 2. Spot improvements
- D. Available corridors for off-road facilities
 1. public rights of way
 2. utility easements
 3. dedicated developer easements
 4. other

IV. Identify special focus areas (current and future)

- A. High use areas
- B. Transit interface
- C. Target populations
- D. Unique opportunities

V. Identify potential projects / infrastructure improvements

- A. Identify projects
 1. New locations
 2. Essential links in system
 3. Barrier removal
 4. Intersection treatments
 5. Spot improvements

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- 6. Priority corridors
- B. Specify preferred treatments
 - 1. On-road
 - 2. Off-road
 - 3. Intersection treatments
 - 4. Bridges and culverts
 - 5. Spot improvements
 - 6. Other

Section 5: Facility Standards and Guidelines**I. General bike/ped planning and design guidelines**

- A. Overview of planning process
- B. The “design” bicyclist/pedestrian
- C. Types of bike/ped facility improvements
- D. Ancillary facility considerations
- E. State and federal guidelines
- F. Local guidelines

II. Typical cross-sections and bicycle and pedestrian design considerations

- A. On-road bicycle facilities (various roadway types; e.g. two-lane, three-lane, five lane, median divided)
 - 1. Wide curb lanes
 - 2. Bike lanes
 - 3. Shoulder sections
- B. Off-road facilities
 - 1. Adjacent to roadway (sidepath)
 - 2. On separate right-of-way (multi-use trail)
- C. Sidewalks/pedestrian walkways
- D. Intersection treatments
 - 1. Bicycle design considerations at intersections
 - a) Bike lanes
 - b) Bike paths
 - c) Right turn lanes
 - d) Signs, signals and pavement markings
 - e) Ramps
 - f) Loop detectors
 - g) Roundabouts
 - 2. Pedestrian design considerations at intersections
 - a) Crosswalk treatments
 - b) Signs and signals
 - c) Pedestrian activated signals
 - d) Mid-block crossings
 - e) Bulb-outs, median refuges and other treatments
 - f) Roundabouts
- E. Innovative design treatments
- F. Streetscape improvements (general)

Section 6: Ancillary Facilities and Programs**I. Mapping and/or signing projects**

- A. Comprehensive route systems
- B. Suitability rating system

- C. Neighborhood route systems
- D. Links to state and/or regional route systems
- E. "Share the Road" signing initiative

II. Spot improvement programs

- A. Roadways and bridges
 - 1. Pothole repair
 - 2. Drain grate replacements
 - 3. Bicycle-safe bridge rails
 - 4. Bicycle-sensitive loop detectors (signalization)
- B. Sidewalks / walkways
 - 1. Surface improvements
 - 2. Ped signals
 - 3. Crosswalk/intersection treatments
 - 4. Curb cuts
 - 5. Removal of sight obstructions and hazards

III. Bicycle parking facilities

- A. Types of devices
- B. Location and installation guidelines

IV. Infrastructure maintenance programs

V. Traffic calming initiatives

VI. Transit interface

- A. Bikes on Bus
- B. Pedestrian access

VII. Safety education programs

- A. School-based
- B. Other

VIII. Safe Routes to School initiatives

IX. Enforcement programs

- A. Enforce traffic laws
- B. Outreach programs

X. Encouragement and promotion

- A. Employer incentive programs
- B. Awareness initiatives
- C. Events

Section 7: Project Development

I. Identify potential projects, preferred treatments and program initiatives

- A. On-road and multi-use path construction projects
 - 1. Specify recommended project type / design treatment
 - 2. Identify functional classification of affected roadway
 - 3. Describe project limits
 - 4. Provide implementation guidance (constructability, available ROW, etc.)

- 5. Develop cost estimates
- B. Ancillary facilities and programs
 - 1. Specify project / program type
 - 2. Provide implementation guidance
 - 3. Develop cost estimates

II. Prioritize projects and program initiatives (infrastructure and non-infrastructure)

- A. Long range projects
- B. Mid-range projects (10 yr)
- C. Short-terms (5 yr)
- D. Spot improvements (immediate)

III. Review funding sources / processes

- A. Potential funding sources
 - 1. Local agencies
 - a) Capital budget
 - b) Powell Bill Funds
 - c) Bond issues
 - d) Maintenance or spot improvement funds
 - e) Other
 - 2. State agencies
 - a) Construction projects
 - i) TIP
 - ii) Enhancements
 - iii) Safety improvement funds
 - iv) CMAQ funds
 - v) Incidental features of highway projects
 - vi) Other
 - b) Safety, education, enforcement and encouragement programs
 - i) Governor's Highway Safety Program
 - ii) Grant programs
 - 3. Federal funding programs
 - 4. Public / private partnerships
 - 5. Special funding opportunities for high priority projects
- B. Guidelines on obtaining funds
 - 1. Federal / state
 - 2. Local
 - 3. Grant opportunities
 - 4. Partnerships

IV. Identify supporting policies/guidelines

- A. State and federal
 - 1. NCDOT bicycle, pedestrian and greenway policies / guidelines
 - 2. FHWA / USDOT guidance
- B. Local
 - 1. Street design guidelines
 - 2. Operational procedures
 - 3. Maintenance guidelines

Section 8: System Maps**I. Existing conditions****II. Recommended network map**

- A. Existing facilities
- B. Priority corridors for improvements
- C. Proposed projects (broken out by type of treatment)

III. Priority corridors for improvement**IV. Detailed project maps (individual project or portion of municipality)****V. State Comprehensive Transportation Plan overlay****Section 9: Project Recommendations****Project Descriptions**

- A. Construction
 - 1. Identify as short, mid or long-term priority
 - 2. Type of treatment(s)
 - 3. Start / end points
 - 4. Overall length
 - 5. Estimated cost
 - 6. Possible funding sources
 - 7. Pitfalls to implementation (e.g. questionable ROW limits, dependent on other local decisions / initiatives, etc.)
- B. Safety and education
 - 1. Describe project type
 - 2. Partners / stakeholders
 - 3. Available resources
 - 4. Cost
 - 5. Possible funding sources
 - 6. Pitfalls to implementation
- C. Law enforcement
 - 1. Type of project
 - 2. Partners / stakeholders
 - 3. Available resources
 - 4. Cost
 - 5. Possible funding sources
 - 6. Pitfalls to implementation
- D. Encouragement
 - 1. Type of project
 - 2. Partners / stakeholders
 - 3. Available resources
 - 4. Cost
 - 5. Possible funding sources
 - 6. Pitfalls to implementation

II. Recommendations for improved bicycle and pedestrian policies, guidelines and procedures

- A. Funding policies and guidelines
- B. Local ordinances

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- C. Land development guidelines
- D. Design guidelines
 - 1. Modify typical cross-section designs to accommodate bike / ped
 - 2. More flexibility in standard design
 - 3. ADA compliance
 - 4. Streetscape considerations
 - 5. other
- E. Departmental procedures (e.g. improved maintenance schedules)
- F. Integration into planning processes (state, regional and local)

III. Funding recommendations

- A. Potential source of funds for specific project
- B. Guidelines for seeking specific types of funds

IV. Staffing / committee recommendations

- A. Assigned staff
- B. Appointed citizen committee / task force
- C. Involvement of existing committees / interest groups
- D. Inter-agency cooperation

Section 10: Guidance on Plan Implementation**I. Identifying opportunities and strategies to move projects forward****II. Adopting the plan****III. Initiating actions**

- A. Creating awareness of plan recommendations
- B. Adopting policies
- C. Assigning staff responsibilities
- D. Appointing committees(s) / task forces
- E. Involving stakeholders
- F. Securing dedicated funding
- G. Developing program initiatives
- H. Coordinating infrastructure improvements

IV. Establishing performance measures**Appendices****Sample cost estimates****Glossary of terms****Other**